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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,240	08/22/2003	James Harding Beech JR.	2003B086	9393

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EXAMINER

JOHNSON, EDWARD M

ART UNIT PAPER NUMBER

1754

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,240

Applicant(s)

BEECH ET AL.

Examiner

Edward M. Johnson

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-105 is/are pending in the application.
- 4a) Of the above claim(s) 1-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 61-105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 61-105, in the reply filed on 5/5/6, is acknowledged. The traversal is on the ground(s) that a search of Group I would not be burdensome. This is not found persuasive because the Examiner made a specific showing of burden, the specifics of which Applicant does not appear to respond to.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 61-105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 61 and 82, step (c), the gaseous products "and entrained catalyst" lacks antecedent basis.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 61-75, 81-99, and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walters et al. US 4,786,622.

Regarding claims 61 and 82, Walters '622 discloses a process for regenerating a catalyst (abstract) comprising receiving coked catalyst in a catalyst regeneration zone, contacting with regeneration gases to combust the coke and regenerate the catalyst (see paragraph bridging columns 3-4), directing the gases and entrained catalyst to a separation zone, centrifugally separating the gases from the entrained catalyst (see column 4, lines 23-31), wherein concentration of particles in flue gas is lowered to 0.2 lbs/ft³ or less (see column 9, lines 5-14), and recycling catalyst to the hydrocarbon conversion zone and the regeneration zone (see column 4, lines 31-35).

Walters fails to disclose a ratio of velocities of at least 1.2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to at least a 1.2 ratio of first, regeneration velocity to second, separating velocity because Walters discloses that the velocity in the separation step is reduced, which would obviously, to one of ordinary skill, motivate a higher velocity in the regeneration zone and lower velocity in the separation zone by a ratio of at least 8.5 or greater with the reasonable expectation of achieving a favorable result from the disclosed reduction of velocities.

Regarding claims 62-71 and 85-95, Walters '622 discloses that the velocity in the separation step is reduced, which would obviously, to one of ordinary skill, motivate a higher velocity in the regeneration zone and lower velocity in the separation zone by a ratio of at least 8.5 or greater with the reasonable expectation of achieving a favorable result from the disclosed reduction of velocities, and including velocities approaching zero at least below 0.1 meters per second as the disclosed velocity reduction is performed.

Regarding claims 72 and 96, Walters '622 discloses a particle concentration of 3-35 lbs/ft³ (see column 3, lines 23-28).

Regarding claims 73-75 and 97-99, Walters '622 discloses at least about 649 and 704-732 degrees C (see column 3, lines 28-40).

Regarding claims 81 and 105, Walters '622 discloses cyclone separators (see column 4, lines 66-68).

Regarding claims 83-84, Walters '622 discloses concentration of particles in flue gas is lowered to 0.2 lbs/ft³ or less (see column 9, lines 5-14).

6. Claims 76-80 and 100-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walters '622 as applied to claims 61 and 82 above, and further in view of Lattner et al. US 6,023,005.

Regarding claims 76 and 100, Walters '622 fails to disclose methanol-to-olefin.

Lattner '005 discloses a methanol-to-olefin process (see publications list and column 1, lines 18-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the methanol-to-olefin process as the reactor in the catalyst regeneration and separation of Walters because Lattner discloses the methanol-to-olefin in a catalytic process for regenerating coked catalyst, which maintains a desired level of coking during conversion

while maintaining maximum activity (see abstract and column 1, lines 50-54).

Regarding claims 77-80 and 101-104, Lattner discloses the methanol-to-olefin in a catalytic process for regenerating coked catalyst wherein the catalyst may be SAPO-34 having a particle size of 90-100 microns (see column 2 and Example 1).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Benslay US 4,744,335 discloses separation of regenerated catalyst from combustion products comprising separating from gaseous combustion products, flowing through vessel, and passing back to the reactor (see description and claims); Farnsworth US 4,786,400 discloses a method for regenerating catalyst used in hydrocarbon conversion comprising partial regeneration of catalyst of dense fluid bed in a riser regenerator (see abstract and Specific Embodiment).

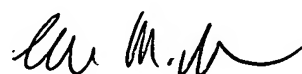
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman

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can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Edward M. Johnson
Primary Examiner
Art Unit 1754

EMJ